

## **REMARKS**

Claims 16, 19, and 20-23 are now pending. The Applicant respectfully requests the Examiner to reconsider and withdraw the rejections in view of the remarks herein.

### **REJECTION UNDER 35 U.S.C. § 102**

Claims 3 and 5 - 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Frei et al. (U.S. Pat. No. 3,358,676). This rejection is respectfully traversed.

### **Claims 16 and 19**

Independent claims 16 and 19 claim a system for applying a magnetic field to a patient's body sufficient for orienting a magnetically responsive element of a magnetic medical device, which system includes a magnet assembly comprising a support adjacent a patient support that comprises a bed having a head and a foot, where four electromagnets are mounted on the support and arranged substantially in a vertical plane, and wherein the magnet assembly is positioned at the head of the bed.

Accordingly, the four magnets are positioned only on one side of the patient support as shown in Figures 47 and 49 of the present application (included below), which provides substantial space around a patient for access by an imaging system 406.

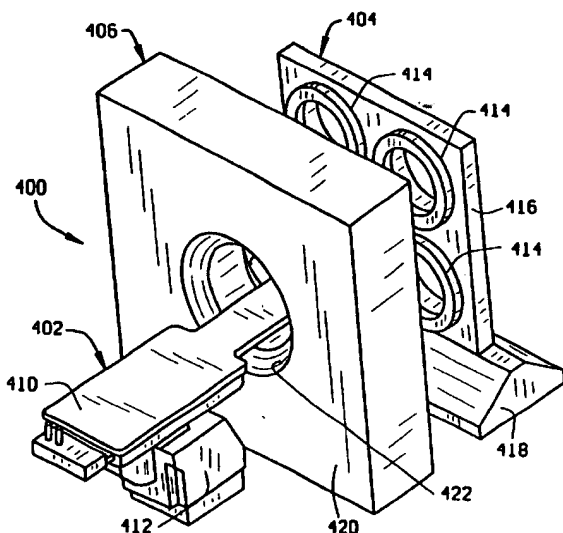


FIG. 47

Serial No. [09/842,417]

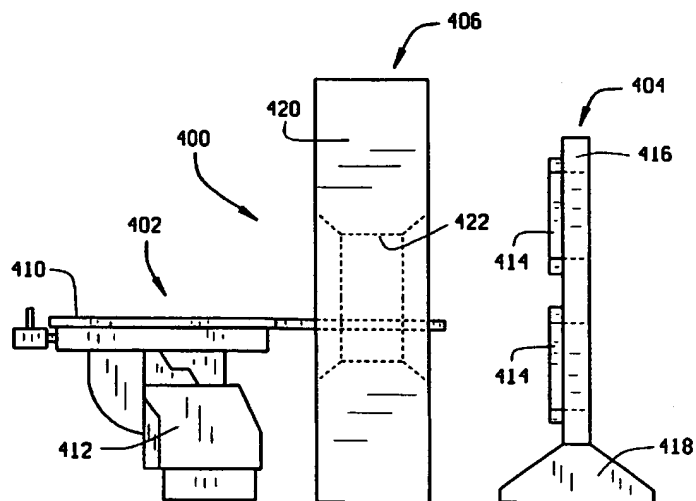
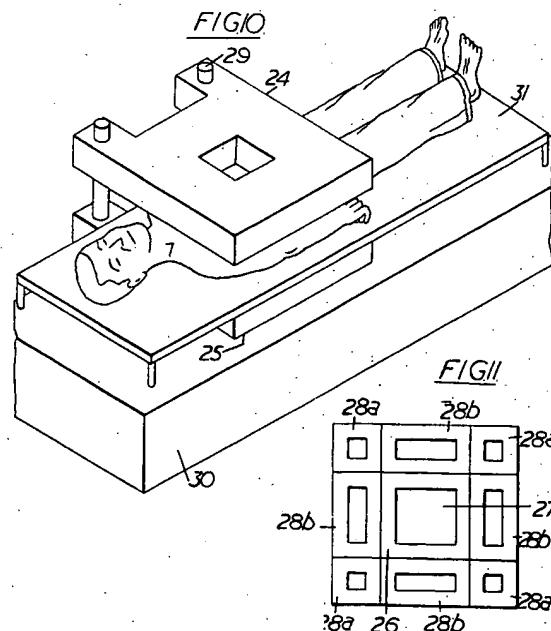


FIG. 49

Page 4 of 9

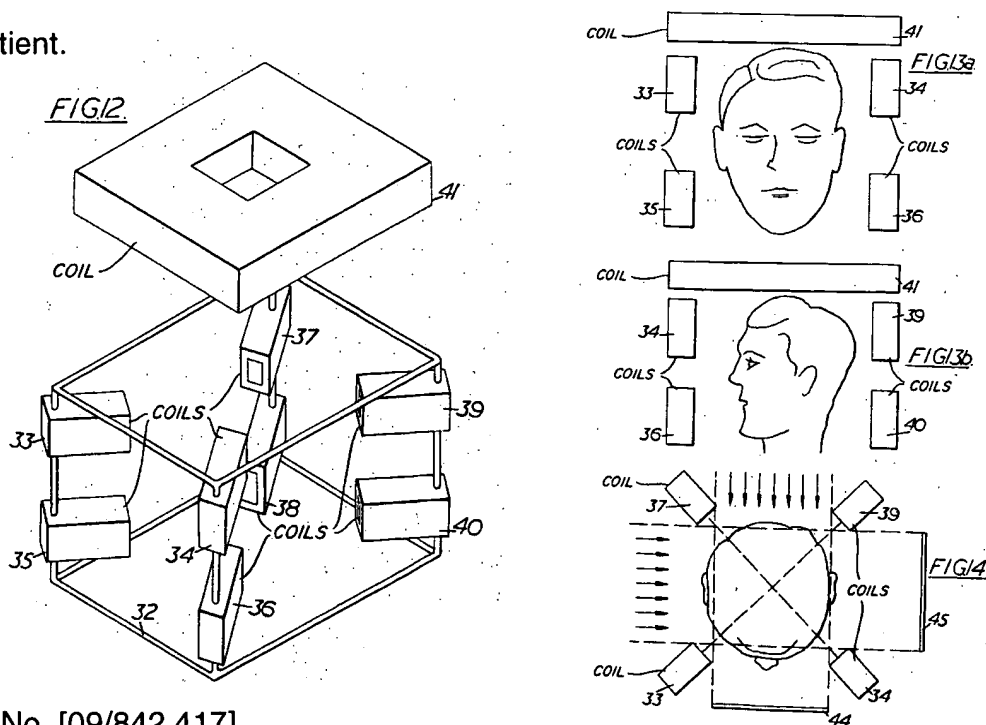
The present application accordingly discloses a system for applying a magnetic field to a patient's body orienting a magnetically responsive element of a magnetic medical device, by using four electromagnets that are capable of generating a magnetic field in an operating region that is sufficient to navigate a magnetic medical device in the portion of a patient, which magnets are not positioned around a patient's body.

The Final Office Action states on page 3 that coils are located at the corners of the planar support (Figure 11, elements 28a), and that the plane of the support may be either horizontal, as shown in Figure 11, or vertical, as shown in the plane made by the support structure of Figure 12. Figure 10 (included below) shows a **patient interposed between two horizontal plate structures 24, 25**, each comprising a plurality of coils 26, 28a. (Col. 5, ll. 52-53). Accordingly, the system in Figure 11 is required to be positioned with the coils above or below a patient, and fills the space around the patient limiting access. As such, the Applicant submits that the Frei system in Figure 10 does not anticipate a magnet assembly comprising a support adjacent a patient support that comprises a bed having a head and a foot, where four electromagnets are mounted on the support in a vertical plane, and wherein the magnet assembly is positioned at the head of the bed.



With regard Figure 12 in Frei (included below), this figure shows an apparatus that “comprises a rigid box like framework 32 having disposed at its corners electric coils 33 to 40 which, when energized with uni-directional current produce homogeneous unidirectional fields in the space defined within the box-like framework and which can, if required, be energized with alternating current. The framework is surmounted by a **centrally disposed coil 41** to be energized by alternating current and is furthermore provided with means (not shown) whereby a patient’s head can be held in a fixed position during the carrying out of the diagnosis and therapy.” (column 6 lines 59-69).

The Office Action states the plane of the support may be vertical as in Fig. 12. While coils 33, 35, 39, and 40 may appear to be in a vertical plane made by support structure 32, coils 33-40 produce magnetic fields in the space defined within the box-like framework in which the patient is positioned (See Fig. 13a included below). Thus, FIGURE 12 DOES NOT SHOW a magnet assembly having four coils on a support, where the plane of the support may be **vertical** as asserted in the Office Action, and where the magnet assembly is **positioned at the head of the bed**, rather than around the patient.



Accordingly, Frei teaches an apparatus that comprises **coils positioned around the head of a patient, rather than on a vertical support positioned at the head of a patient support bed**, such that the space around the patient is confined and access by imaging equipment is restricted. Thus, Frei's teachings are contrary to the disclosure of the present application, which provides substantial space around a patient for access by an imaging system. As such, the Applicant submits that Frei does not anticipate a magnet assembly comprising a support adjacent a patient support that comprises a bed having a head and a foot, where four electromagnets are mounted on the support in a vertical plane, and wherein the magnet assembly is positioned at the head of the bed.

#### Claim 23

Claim 23 has been rewritten in independent form to include the limitations of base claim 19, from which it depends. The Applicant submits that claim 23 is further distinguished over Frei, in that it recites the patient support is moveable relative to the electromagnets.

In Frei, the single coil 41 is furthermore provided with means (not shown) whereby a patient's head can be held in a fixed position. This not only further restricts the space around the patient, but prevents movement of the patient relative to coil 41. This is contrary to the claimed subject matter in claim 23, which clarifies that the patient support is moveable and rotatable about its longitudinal axis to facilitate positioning of the patient relative to the operating region of the electromagnets.

As such, the Applicant submits that Frei does not anticipate a magnet assembly comprising a support adjacent a patient support that comprises a bed having a head and a foot, where four electromagnets are mounted on the support in a vertical plane, and wherein the magnet assembly is positioned at the head of the bed, wherein the four

electromagnets are capable of generating a magnetic field in an operating region that is sufficient to navigate a magnetic medical device in the portion of a patient that is within the operating region, and wherein the patent support is moveable and rotatable about its longitudinal axis to facilitate positioning of the patient relative to the operating region of the electromagnets.

As such, the Applicant submits that Frei does not anticipate

Claim The Applicant further submits that Frei, in addition to teaching not teaching or disclosing a the Furthermore, Frei does

#### Claims 21-22

With regard to dependant claims 21-23, these claims depend from independent claim 19, which the Applicant believes to be allowable in view of the above remarks. As such, the Applicant submits that claims 21-22 are also allowable for at least these reasons.

#### REJECTION UNDER 35 U.S.C. § 103

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Frei et al. (U.S. Pat. No. 6,529,761) in view of Arensen et al. (U.S. Pat. No. 6,304,769).

Claim 4 has been cancelled without prejudice.

#### CONCLUSION

There is no express teaching in Frei of a planar support having four coils arranged in a *vertical plane* at the head of a patient bed, and applicant submits that there is no teaching or suggestion in Frei to use coils arranged in a *vertical plane at the head of a patient bed* given the Figures that show multiple coils either above and below,

or substantially surrounding a patient. It is believed that all of the stated grounds of rejection have been properly traversed, and that the claims are in a condition for allowance. Applicant therefore respectfully requests that the Examiner allow the application, or at least enter the Amendment to simplify the issues for appeal and place the application in better form for appeal. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7500.

Respectfully submitted,

Dated: 10-12-2006

By: Kevin Pumm  
Kevin Pumm, Reg. No. 49,046

HARNESS, DICKEY & PIERCE, P.L.C.  
7700 Bonhomme, Suite 400  
St. Louis, Missouri 63105  
(314) 726-7500

[KMP/]